To understand the behavior of humans and non-human animals better, biological principles are applied to these behaviors. This field is known as biological psychology, a branch of psychology that is also referred to as behavioral neuroscience. Biological psychologists seek to examine the physiological processes behind different behaviors, whether normal or abnormal. The field of psychological research has been influenced by the work of early scientists and philosophers. William James, for example, argued that the physiology of the brain must be taken into account in the study of psychology. René Descartes believed that the pineal gland is the point where the body and the mind meet. His work on the pineal gland has been influential in the development of modern neuroscience.

In 1848, Phineas Gage's brain injury case study was conducted. This study was significant because it provided evidence that the functional work of the brain has implications for behavior. The first use of the term “psychobiology” in modern times was in the 1914 book “An Outline of Psychobiology” by Knight Dunlap. This book and a journal on psychobiology were established by Dunlap to publish research studies that incorporate physiological and mental functions.

Biological psychology has made significant contributions to the study of medical disorders. Notable disorders include Alzheimer's disease (progressive cognitive deterioration and behavioral changes), Parkinson's disease (central nervous system disorder), and Huntington's disease (neurogenetic disorder). Schizophrenia, clinical depression, mania, anxiety disorders, autism, and drug abuse are also hot areas of study in behavioral neuroscience today.

The three aspects of the biological perspective are physiology, behavior, and genetics. Physiology involves the study of the mechanisms of the nervous system to understand human behavior. The comparative method involves studying and comparing different species of animals. Genetics involves the investigation of the inheritance of traits and attributes, which may help understand human behavior.